No.



8300142

TO ALL TO WHOM THESE PRESENTS SHALL COME;

Pioneer Hi-Bred International, Inc.

Withereas, there has been presented to the

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLI-CANT(S) FOR THE TERM OF eighteen TEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC seed of the variety in a public repository as provided by LAW, the right to ex-UDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, MPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT CY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

CORN

'B09'

In Lestimony Withereot, I have hereunto set my hand and caused the seal of the Blant Variety Protection Office to be affixed at the City of Washington this 21st day of December the year of our Lord one thousand nine

hundred and eighty-four.

John R Block
Secretary at Assistant

Plant Variety Protection Office Livestock, Meat, Grain & Seed Di

ricultural Marketing Service

AGRICULTURAL LIVESTOCK, MEAT APPLICATION FOR PLANT VA	ENT OF AGRICULTUMARKETING SERVE, GRAIN & SEED DIVARIETY PROTECTIONS ON PROFESS.	/ICE VISION	FORM APPROVED: OMB NO. 0581-0008 No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).			
1. NAME OF APPLICANT(S)		2. TEMPORARY DESIGNATION	3. VARIETY NAME			
Pioneer Hi-Bred Internation	al, Inc.		В09			
4. ADDRESS (Street and No. or R.F.D. No., City, Plant Breeding Division Department of Corn Breeding P.O. Box 85, Johnston, IA	·	5. PHONE (Include area code) 515/270-3300	FOR OFFICIAL USE ONLY PYPO NUMBER 8300142			
6. GENUS AND SPECIES NAME	7. FAMILY NA	ME (Botenical)	9 5/26/83			
Zea mays	Gramine	ae	5/26/83 TIME 2:30			
8. KIND NAME	9.	DATE OF DETERMINATION	AMOUNT FOR FILING			
Corn		1975	\$ 1,000 DATE 5/26/84 AMOUNT FOR CERTIFICATE			
10. IF THE APPLICANT NAMED IS NOT A "PE	RSON," GIVE FORM	OF ORGANIZATION (Corporation				
partnership, association, atc.) Corporation			\$ 500.00 DATE 11/15/84			
11. IF INCORPORATED, GIVE STATE OF INCO	NOITAROAR		May 6, 1926			
Johnston, IA 50131-0085 14. CHECK APPROPRIATE BOX FOR EACH AT Exhibit A, Origin and Breeding History of Section 52 of the Plant Variety Protection b. X Exhibit B, Novelty Statement 15. DOES THE APPLICANT(S) SPECIFY THAT SEED? (See Section \$3(a) of the Plant Variety	of the Variety (See on Act.)	c. Exhibit C. Objective from Plant Variety P d. Exhibit D, Additional	Description of the Variety			
16. DOES THE APPLICANT(S) SPECIFY THAT	THIS VARIETY SE		WHICH CLASSES OF PRODUCTION			
LIMITED AS TO NUMBER OF GENERATIO	N\$7	BEYOND BREEDER SE	ED?			
18. DID THE APPLICANT(S) FILE FOR PROTE	CTION OF THE VAR	Foundation IETY IN THE U.S. OR OTHER CO	LINTRIES?			
	-		Yes (If "Yes," give name of countries and dates)			
10 HAVE BIGHTS BEEN COANTED IN THE	C OC OTHER COM	ITB/201	X No			
19. HAVE RIGHTS BEEN GRANTED IN THE U.	s. On Olner Coon	() Riesr	Yes (If "Yes," give name of countries and dates)			
			X No			
20. The applicant(s) declare(s) that a viable seplenished upon request in accordance with The undersigned applicant(s) is (are) the distinct, uniform, and stable as required in Variety Protection Act. Applicant(s) is (are) informed that false re	th such regulations owner(s) of this sea n Section 41, and i	as may be applicable. rually reproduced novel plant vi s entitled to protection under the	ariety, and believe(s) that the variety is ne provisions of Section 42 of the Plant			
SIGNATURE OF APPLICANT Pioneer Hi-Bred Internationa	1 Inc		DATE			
by:	. منتشد و سد					
SIGNATURE OF APPLICANT		·	DATE			
FORM LMGS-470 (9-81) (Edition of 1-78 is obse			May 19, 1983 1			

CORN

'B09'

14A. Exhibit A. Origin and Breeding History

Pedigree: 555/031) X32154

Pioneer line 'B09', Zea mays L., a yellow dent corn inbred, was developed by Pioneer Hi-Bred International, Inc. from the F2 population of the single cross 555×031 . The progenitors of 'B09'are also proprietary inbred lines of Pioneer Hi-Bred International, Inc. The pedigree method of breeding was used in the development of this inbred as per the following.

F2 seed was obtained in the field at Mankato, Minnesota, during the summer of 1971 by selfing the Fl hybrid 555×031 . population was grown and self-pollinated at Mankato in 1972. teen F3 ears were grown ear-to-row at Homestead, Florida, during the winter of 1972-73 and self-pollinated. Eight ears were saved from F3 ear-row number three. In 1973, the F4 family was grown at Mankato and eight self-pollinated ears were saved from ear-row number two. During the winter of 1973-74, the F5 family was grown ear-to-row at Homestead and seven ears were saved from ear-row number one. In addition, an F5 topcross was made to an inbred tester for evaluation of the line's general combining ability. 1974, the testcross made to the F5 was yield tested at Mankato. The F6 generation was grown ear-to-row at Mankato in 1974 and five self-pollinated ears were saved from F6 ear-row number five. Based on hybrid yield test and inbred per se performance, the line was determined to be superior to other inbreds evaluated at Mankato in 1974. The line was named 'B09' in January 1975. Since the time that the line was named, additional hybrid combinations have been evaluated and subsequent generations of the line have been grown and hand-pollinated with observations made for uniformity. outline of the breeding profile of the inbred is attached.

'B09' has shown uniformity and stability for all traits as described in Exhibit C (form LPGS-470-28) - "Objective Description of Variety." It has been self-pollinated and ear-rowed a sufficient number of generations with careful attention paid to uniformity of plant type to assure genetic homozygosity and phenotypic stability. 'B09' has been increased by the Parent Corn Department, Pioneer's foundation seed group, each year since 1976. The line has been increased both by hand and in isolated fields with continued observation for uniformity.

No variant traits have been observed or are expected in 'B09'.

Pioneer Hi-Bred International, Inc., Des Moines, Iowa, is the employer of the plant breeders involved in the selection and development of 'B09'. Pioneer Hi-Bred International, Inc. has the sole rights and ownership of 'B09'.

14A. Exhibit A. Origin and Breeding History of Corn Inbred Line 'B09'

Season/Year	Inbreeding Level	Nursery Location	Pedigree	Number of Ears Saved	
Summer 1971	Fl	Mankato, MN	555/031	Bulk	
Summer 1972	F2	Mankato, MN	555/031)X	19	
Winter 1972-73	F3	Homestead, FL	555/031)X3	8	
Summer 1973	F4	Mankato, MN	555/031) X32	8	
Winter 1973-74	F5*	Homestead, FL	555/031) X321	7	
Summer 1974	F6**	Mankato, MN	555/031) x3215	5	
January 1975	Line named	'в09'.			
1975-82 Line increased by hand-pollination and in isolated fields with observations made for uniformity.					

^{*}Testcross made for yield testing in 1974.

^{**}More hybrid combinations made involving 'B09' for testing in 1975.

4B. Exhibit B. Novelty Statement

'B09' is most similar to the public inbred line B37. 'B09' differs from B37 by maturity and anther color. 'B09' reaches 50% pollen shed and 50% silk, 60 and 105 heat units, respectively, earlier than B37. 'B09' anther color is green whereas the anther color of B37 is red.

EXHIBIT (Com)

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE LIVESTOCK, POULTRY, GRAIN & SEED DIVISION BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY

CORN (ZEA MAYS)	
NAME OF APPLICANT(S)	FOR OFFICIAL USE ONLY
Pioneer Hi-Bred International, Inc. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)	PVPO NUM 8300142
Plant Breeding Division	VARIETY NAME OR TEMPORARY
Department of Corn Breeding	DESIGNATION
PO Box 85	'B09'
Johnston, IA 50131-0085 Place the appropriate number that describes the varietal character of this variety in the	harar balan
Place a zero in first box (e-g- 0 8 9 or 0 9) when number is either 99 or less of	r 9 or less.
1. TYPE:	
2 1 = SWEET 2 = DENT 3 = FLINT 4 = FLOUR 5 = F	OP 6 = ORNAMENTAL
2. REGION WHERE BEST ADAPTED IN THE U.S.A.:	
1 = NORTHWEST 2 = NORTHCENTRAL 3 = NORTHEAST 2 5 = SOUTHCENTRAL 6 = SOUTHWEST 7 = MOST REGIONS	4 = SOUTHEAST
	'comments'' (pg. 3) state how
	ts were calculated)
8 7 DAYS FROM EMERGENCE TO 50% OF PLANTS IN SILK	2 9 HEAT UNITS
DAYS FROM 50% SILK TO OPTIMUM EDIBLE QUALITY	HEAT UNITS
DAYS FROM 50% SILK TO HARVEST AT 25% KERNEL MOISTURE	HEAT UNITS
4. PLANT:	
1 8 9 CM. HEIGHT (To tassel tip)	9 1 CM, EAR HEIGHT (To base of top
0 5 CM. LENGTH OF TOP EAR INTERNODE	
Number of Tillers: Number of Ears Per Stalk	· · · · · · · · · · · · · · · · · · ·
11 1 1 NUNE 2*1-2 3-2-3 4- >3 111 ****	: = SLIGHT TWO-EAR TENDENCY D-EAR TENDENCY
Cytoplasm Type:	, , , , , , , , , , , , , , , , , , ,
1 1 = NORMAL 2 = "T" 3 = "S" 4 = "C" 5 = OTHEF	(Specify)
1 1 = NORMAL 2 = "T" 3 = "S" 4 = "C" 5 = 01HEF	
5. LEAF (Field Corn Inbred Examples Given):	•
Color:	
1 = LIGHT GREEN (HY) 2 = MEDIUM GREEN (WF9) 3 = DARK GR	EEN (B14) 4 = VERY DARK GREEN (
Angle from Stalk (Upper half): Sheath Pubscence:	
2 1 = < 30° 2 = 30-60° 3 = > 60° 1 1 = LIGHT 3 = HEAV	
Marginal Waves: Longitudinal Creases:	
1	IT (OH51) 2 = FEW (OH56A)
1 = NONE (HY) 2 = FEW (WF9) 3 = MANY (OH7L) 1 1 = ABSEN	
Width: Length:	
0.6	CAR NODE LEAF
O 7 1 CM.	EAR NODE LEAF
1 6 NUMBER OF LEAVES PER MATURE PLANT	t .

6.	TASSEL:		
	0 8	NUMBER OF LATERAL BRANCHES	· · · · · · · · · · · · · · · · · · ·
	Branch Angl	te from Central Spike: Penduncie Length:	
	3	1 = < 30° 2 = 30-40° 3 = > 45° 1 5 CM. FROM TOP LEAF TO B	SAL BRANCHES
	Pollen Shed	L	٠.
	2	1 = L(GHT (WF9) 2 = MEDIUM 3 = HEAVY(KY21)	
(٦	Observed yellow green	
	5	Anther Color: 1 = YELLOW 2 = PINK 3 = RED 4 = PURPLE Glume Color: 6 = OTHER (Specify)	5 = GREEN
	5	Observed yellow green	
٠	Poilen Resto	pration for Cytoplasms (o = Not Tested, 1 = Partial, 2 = Good)	
	0	0 "S" 0 "C" OTHER (Specify Cytoplesm and degrees of restoration	n)
7	7. EAR (Husi	ked Ear Data Except When Stated Otherwise):	
	1 1	CM LENGTH 3 5 MM. MID-POINT 5 4 GM. WEIGHT	
٠	Kernel Row	s:	
	2	1 = INDISTINCT 2 = DISTINCT 1 5 NUMBER	
	2	1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = SPIRAL	
	Silk Color (I	Exposed at Silking Stage):	
	1	1 = GREEN 2 = PINK 3 = SALMON 4 = RED. Observed pale greenish-yellow	
	Husk Color:		
-	2	FRESH 1 = LIGHT GREEN 2 = DARK GREEN 3 = PINK	
	6	DRY \$ 4 = RED 5 = PURPLE 6 = BUFF	
	Husk Extent	tion: (Harvest Stage) Husk Leaf:	
	2 3 = L0	HORT (Ears Exposed) 2 = MEDIUM (Barely Covering Ear) ONG (8—10CM Beyond Ear Tip) ERY LONG (> 10 CM) 1 = SHORT (< 8 CM) 2 = M 3 = LONG (> 15 CM)	EDIUM (8-15 CM)
	Shank:	Position at Dry Husk Stage:	
	0 5	CM LONG 5 NO. OF INTERNODES 1 1 = UPRIGHT 2 = HORIZO	NTAL 3 PENDE
	Taper:	Drying Time (Unhusked Ear):	
	2	1 = SLIGHT 2 = AVERAGE 3 = EXTREME 1 = SLOW 2 = AVERAGE	GE ! FAST :
8.	KERNEL (D		
	Size (From 6	Ear Mid-Point): MM LONG 0 6 MM, WIDE 0 5 MM, THICK	
	Shape Grade	(% Rounds)	
-	2	1 = < 20	

T=PUPPLE 8=PALE PUPPLE 9=VARIEGATED (Describe) 4 Endosperm Color: 1=WHITE 2=PALE YELLOW 3=YELLOW 4=PINK-ORANGE 5=WHITE CA Observed brownish orange Endosperm Type: 1 = SWEET (wil) 2 = EXTRA SWEET (ibr2) 3 = NORMAL STARCH 4 = HIGH AMYLOSE STARCH 5 = WAXY STARCH 6 = HIGH PROTEIN 7 = HIGH LYSINE 8 = OTHER (Specify) 9. COB: 1 7 OM, WEIGHT /100 SEEDS (Unsized Sample) 9. COB: 2 1 - WEAK 2 = STRONG 3 1 - WHITE 2 = PINK 3 - RED 4 = BROWN 5 OTHER (Specify) 10. DISEASE RESISTANCE (O = Not Tested, 1 = Susceptible, 2 = Reputation): 2 STALK ROT (Diologia) 2 STALK ROT (Fluerium) 2 STALK ROT (Globeralia) 5 = VARIEGATED 5 SOUTHERN LEAF BLIGHT 2 SMUT (Head) 5 SOUTHERN LEAF BLIGHT 2 SMUT (Head) 5 SOUTHERN RUST 2 CORN SMUT (Common) 2 SACTERIAL WILT (Stews 3 SACTERIAL LEAF BLIGHT 1 MAIZE DWARF MOSAIC 0 STUNT 0 SACTERIAL STUNCE (SOUTHERN LEAF BLIGHT 1 ROOTWORM (Western) 0 SAPSEETLE 0 APHID 0 AP	8. KERNE	L (Oried) :					·	
Alsumer Color: 1 - HOMOZYGOUS 2 - SEGREGATING (Describe) 1 - WHITE 2 - PINK 3 - TAN 4 - BROWN 5 - BRONZE 6 - 7 - PUMPLE 9 - PALE PURPLE 9 - VARIEDATEO (Describe) 4 Endosperm Color: 1 - WHITE 2 - PALE YELLOW 3 - VELLOW 4 - PINK-ORANGE 5 - WHITE CA Observed brownish orange Endosperm Type: 3 - TAN 4 - BROWN 4 - PINK-ORANGE 5 - WHITE CA Observed brownish orange Endosperm Type: 3 - TANEET (wil) 2 - EXTRA SWEET (wil) 3 - NORMAL STARCH 4 - HIGH AMYLOSE STARCH 5 - HIGH PROTEIN 7 - HIGH LYSINE 8 - OTHER Genetry) 5 - WARY STARCH 6 - HIGH PROTEIN 7 - HIGH LYSINE 8 - OTHER Genetry) 8 - COSI: 1 - WEAK 2 - STRONG 3 - WHITE 2 - PINK 3 - RED 4 - BROWN 5 - VARIEGATED 5 - OTHER (Specify) 10. DISEASE RESISTANCE (O - NOT Tested, 1 - Susceptible, 2 - Population of the Common 1 - Subsectible of the Common 1 - Subsectible of the Common 1 - Subsectible of the Common 2 - STALK ROT (Globeralle) 2 STALK ROT (Diploids) 2 - STALK ROT (Fountium) 2 - STALK ROT (Globeralle) 3 - VARIEGATED 5 - STALK ROT (Diploids) 2 - STALK ROT (Globeralle) 4 - MONTHERN LEAF BLIGHT 1 - SOUTHERN LEAF BLIGHT 2 - SMUT (Head) 5 - VARIEGATED 5 - STALK ROT (Globeralle) 6 - STALK ROT (Globeralle) 7 - SOUTHERN ROUTHERN LEAF BLIGHT 1 - SOUTHERN LEAF BLIGHT 2 - SMUT (Head) 7 - SOUTHERN ROUTHERN 1 - SOUTHERN LEAF BLIGHT 2 - SMUT (Head) 8 - STALK ROT (Globeralle) 9 - SACTERIAL WILT (Stews 1 - SOUTHERN LEAF BLIGHT 2 - SMUT (Head) 9 - SACTERIAL WILT (Stews 1 - SOUTHERN LEAF BLIGHT 1 - SOU	1	Pericarp Color:	The second secon	- - ·				
1 - WHITE 2 - PINK 3 - TAN 4 - BROWN 5 - BRONZE 6 - 7 - PURPLE 8 - PALE PURPLE 9 - VARIEDATED (Omeribe) 4 Endosperm Color: 1 - WHITE 2 - PALE VELLOW 3 - VELLOW 4 - PINK-ORANGE 5 - WHITE CA Observed brownish orange Endosperm Type: 3 - SWEET (will) 2 - EXTRA SWEET (will) 3 - NORMAL STARCH 4 - HIGH ANYLOSE STARCH 5 - WARY STARCH 6 - HIGH PROTEIN 7 - HIGH LYSINE 8 - OTHER ISpecify) 1 7 OM. WEIGHT //OO SEEDS (Unview Sample) 9. COB: 2 1 - WEAK 2 - STRONG 3 1 - WHITE 2 - PINK 3 - RED 4 - BROWN STRENGTH: 2 1 - WEAK 2 - STRONG 3 1 - WHITE 2 - PINK 3 - RED 4 - BROWN STRENGTH: 2 STALK ROT (Diploids) 2 STALK ROT (Plustrum) 2 STALK ROT (Globerelis) S - VARIEGATED SOTHER ISpecify) 10. DISEASE RESISTANCE (O - NOT Tested, 1 - Susceptible, 2 - Pressument: 2 STALK ROT (Diploids) 2 STALK ROT (Plustrum) 2 STALK ROT (Globerelis) SOUTHERN RUST 2 CORN SMUT (COMMON) 2 SACTERIAL WILT (Stews SACTERIAL LEAF SLIGHT 1 MAIZE DWARP MOSAIC 0 STUNT 11. INSECT RESISTANCT (O - NOT Tested, 1 - Susceptible, 2 - Pressument: Tole Table 1 CORN SOUTHERN ROST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN: CHARACTER VARIETY CHARACTER VARIETY MUUTIV A632 Karmal Type B37 OUT (Balloth) S37 Plant Type B37 OUT (Balloth) A632 Karmal Type B37 REFERENCES: U.S. Oppartment Agriculture. Verbook 1937. CORT: Culture, Processing, Products. 1970 AV Publishing Company, Westport, Connecticut. (Numerous (Authorn) 1 Emmon, R.A., G.W. Seades, and A.C. Ferser. A Summery of Linkage Studies in Maiss-Cornell A.E.S., Mem. 180. 1935 The Mutant of Maize. 1956. Crop Senses Southy of America, Medison, Wilconsis. Stringfeld, G.H. Maise Inhead Lines of Other, One A62. Studies of Color Interes Lines - Pho. Thesis, Ohio State University COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. REAT UNITED A STALK TOTHER STARCH AND THE STARCH AN	• •		8 = VARIEGAT	ED (Describe)				
T=PUPPLE 8=PALE PUPPLE 9=VARIEGATED (Describs) 4 Endosperm Color: 1=WHITE 2=PALE YELLOW 3=YELLOW 4=PINK-ORANGE 5=WHITE CA Observed brownish orange Endosperm Type: 3 1=SWEET (su1) 2=EXTRA SWEET (sh2) 3=NORMAL STARCH 4=HIGH AMYLOSE STARCH 5=WAXX STARCH 6=HIGH PROTEIN 7=HIGH LYSINE 8=OTHER (Specify) 9, COB: 1 7 MM. DIAMETER AT MID-POINT Strength: 2 1=WEAK 2=STRONG 31=NWHITE 2=PINK 3=RED 4=BROWN 5OTHER (Specify) 10. DISEASE RESISTANCE (O=Not Tested, 1=Susceptible, 2=Resistant): 2 STALK ROT (Diologis) 2 STALK ROT (Fuserium) 2 STALK ROT (Globeralis) 2 NORTHERN LEAF BLIGHT 1 SOUTHERN LEAF BLIGHT 2 SMUT (Head) 3 SOUTHERN RUST 2 CORN SMUT (COMMON) 2 SMUT (Head) 4 SACTERIAL LEAF BLIGHT 1 MAIZE DWARF MOSAIC 0 STUNT OTHER (Specify) 11. INSECT RESISTANCT (O=Not Tested, 1=Susceptible, 2=Revisionn): 12 VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTER SQIVEN: CHARACTER VARIETY CHARACTER VARIETY Mauriny A632 Kernsi Type B37 Usage B37 REFERENCES: U.S. Descriment Agriculture. Vearbook 1937. Corn: Culture, Processing, Products. 1970 Av Publishing Company, Westport, Connecticur. (Numerous (Authors) Enteron. R.A., GA, B.E.S., Mem. 180. 1935 The Mutants of Maize, 1986. Crop Science Society of America, Medison, Wiscomen. Stringfield, C.H. Maize Internal Leas College Cond. Publishing Company, Westport, Connecticur. (Numerous (Authors) Enteron. R.A., GA, Bacil, and A. F. Fraser. A Burmary of Linkage Studies in Maize.Cornell A.E.S., Mem. 180. 1935 The Mutants of Maize, 1986. Crop Science Society of America, Medison, Wiscomen. Stringfield, C.H. Maize Internal Leas College Cond. Publishing Company. Description. (Namerous Culture) Stringfield, C.H. Maize Internal Leas College Cond. Publishing Company. Medison. (Namerous Culture) Stringfield, C.H. Maize Internal Leas College Cond. Publishing Company. The Mutants of Maize. (1986) Crop Science Society of America, Medison, Wiscomen. Stringfield, C.H. Maize Internal Leas College Col		Aleurone Color:	1 = HOMOZYGO	ous 2 = \$	SEGREGATING (Describe)			
Observed brownish orange Endosperm Type: 3	1		•				5 = BRONZE	6 =
1 - SWEET (But) 2 - EXTRA SWEET (SP2) 3 - NORMAL STARCH 5 - MIGH AMYLOSE STARCH 5 - WARY STARCH 6 - HIGH PROTEIN 7 - HIGH LYSINE 5 - OTHER (Specify) 1 7 GM, WEIGHT /100 SEEDS (Unsized Sample) 3 COB: 2 1 MM. DIAMETER AT MID-POINT Strength: Color: 2 1 - WEAK 2 - STRONG 3 1 - WHITE 2 - PINK 3 - RED 4 - BROWN 5 OTHER (Specify) 10. DISEASE RESISTANCE (O - Not Tested, 1 - Susceptible, 2 - Resistant: 2 STALK ROT (Diploids) 2 STALK ROT (Fluarium) 2 STALK ROT (Gibberells) 2 NORTHERN LEAF BLIGHT 1 SOUTHERN LEAF BLIGHT 2 SMUT (Head) 3 SOUTHERN RUST 2 CORN SMUT (COMMON) 2 BACTERIAL WILT (Stews BACTERIAL LEAF BLIGHT 1 MAIZE DWARF MOSAIC 0 STUNT OTHER (Specify) 11. INSECT RESISTANCT (O - Not Tested, 1 - Susceptible, 2 - Protessmit: Tolerant 1 CORNSORER (BUCOPEAN) 0 EARWORM 0 SAPBEETLE 0 APHID 0 ROOTWORM (Northern) 1 ROOTWORM (Western) 0 ROOTWORM (Southern) 0 OTHER (Specify) 12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN: CHARACTER VARIETY CHARACTER VARIETY Maturity A632 Kernel Type B37 Quality (Edible) EAT Type B37 Quality (Edible) FET Type B37 Quality (Edible) The Mutantor Misc. 1968. Cross lenses Society of America. Misconsin. Stringfield, G.H. Maize Inbred Lines of Ohio. Ohio A.E.S. Bul. 831. 1959. Butler, D.R. 1954 - A System for the Clearing at lines - FID. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO - Minimum air temperature in Fahrenheit, but not greater than 86. LO - Minimum air temperature in Fahrenheit, but not less than 50.	4				W 3-YELLOW	4 = PINK-OR/	NGE 5 = WHI	TE CAI
3 S=WAXYSTARCH 6= HIGH PROTEIN 7= HIGH LYSINE 8= OTHER (Specify) 1 7 GM, WEIGHT /100 SEEDS (Unsized Sample) 9, COB: 2 1 MM. DIAMETER AT MID-POINT Strangth: Color: 2 1- WEAK 2= STRONG 3 1- WHITE 2= PINK 3- RED 4 = BROWN 6- OTHER (Specify) 10. DISEASE RESISTANCE (O = Not Tested, 1 = Susceptible, 2 = Resistanch: Tolerant 2 STALK ROT (Diploids) 2 STALK ROT (Diploids) 2 STALK ROT (Glorent State	Endospe	rm Type:		, *				
9. COB: 2 1 MM. DIAMETER AT MID-POINT Strength: 2 1- WEAK 2 = STRONG 3 1- WHITE 2 = PINK 3 = RED 4 = BROWN 2 1- WEAK 2 = STRONG 3 1- WHITE 2 = PINK 3 = RED 4 = BROWN 3 5 = VARIEGATED 6 OTHER (Specify) 10. DISEASE RESISTANCE (O = Not Tested, 1 = Susceptible, 2 = Resistance): 2 STALK ROT (Diolodis) 2 STALK ROT (Globoris) 3 S = VARIEGATED 4 = BROWN 4 SOUTHERN LEAF BLIGHT 5 SOUTHERN LEAF BLIGHT 6 SOUTHERN LEAF BLIGHT 7 SOUTHERN LEAF BLIGHT 7 SOUTHERN SPECIFY 1 MAIZE DWARF MOSAIC 9 STUNT 11. INSECT RESISTANCT (O = Not Tested, 1 = Susceptible, 2 = Presistance): 1 CORNSORER (European) 9 RATEORISM (Northern) 1 ROOTWORM (Southern) 1 OTHER (Specify) 12 VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN: 12 CHARACTER 12 VARIETY 13 CHARACTER 14 VARIETY 15 CHARACTER 16 VARIETY 17 CHARACTER 17 CHARACTER 18 VARIETY 18 BB37 Cuslity (Edible) 19 B37 Cuslity (Edible) 19 B37 Cuslity (Edible) 10 Cornectiout. (Numerous (Authors) 10 Cereton, R.A., G.W. Beadle, and A.C. Fraser. A Summary of Linkage Studies in Maiss.Cornell A.E.S., Mem. 180. 1935 17 The Mutants of Mixize. 1956. Corp. Science Society of America. Medison, Wisconsin. 18 Stringfield, G.H. Maize Inbred Lines of Ohio, Ohio A.E.S. Bu. 831. 1959. 18 Guitar, D.R. 1954 — A System for the Classification of Corn Inbred Lines - PhD. Thesis, Ohio State University. 18 COMMENTS: Heat units are accumulated from daily temperatures as follows: 18 HI = Maximum air temperature in Fahrenheit, but not greater than 86. 10 Minimum air temperature in Fahrenheit, but not less than 50. 10 Hindimum air temperature in Fahrenheit, but not less than 50.	3				-	2 =		ARCH
MM. DIAMETER AT MID-POINT Strength: 2 1-WEAK 2=STRONG 3 1-WHITE 2=PINK 3=REO 4=SROWN 5=VARIEGATED 6OTHER (Specify) 10. DISEASE RESISTANCE (O = Not Texaed, 1 = Susceptible, 2 = Resistant):	1 7	GM. WEIGHT /10	0 SEEDS (Unsized	Sample)		<u>-</u>		
10. DISEASE RESISTANCE (O = Not Tested, 1 = Susceptible, 2 = Resistant): 2	2 1		AT MID-POINT					-
Tolerant 2 STALK ROT (Diplodie) 2 STALK ROT (Fuserium) 2 STALK ROT (Gibberelle) 2 STALK ROT (Gibberelle) 2 STALK ROT (Gibberelle) 3 SOUTHERN LEAF BLIGHT 2 SMUT (Head) 3 SOUTHERN RUST 2 CORN SMUT (Common) 2 BACTERIAL WILT (Stews 3 STUNT 0 HAZE DWARF MOSAIC 3 STUNT 11. INSECT RESISTANCT (O = Not Tested, 1 = Suscaptible, 2 = Resistant): Tolerant 1 CORNSORER (European) 0 ROOTWORM (Northern) 1 ROOTWORM (Western) 0 ROOTWORM (Sauthern) 0 THER (Specify) 12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN: CHARACTER VARIETY Maturity A632 Kernel Type B37 Quality (Edible) Ear Type B37 Quality (Edible) Ear Type B37 REFERENCES: U.S. Department Agriculture. Yearbook 1937. Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors) Emeron, R.A., G.W. Beadle, and A.C. Freer. A Summary of Linkage Studies in Medica.Cornell A.E.S., Mem. 180. 1935 The Mutants of Maize. 1968. Crop Science Society of America. Medicon, Wisconsin. Stringfield, G.H. Meize Inbred Lines of Ohio. Ohio A.E.S. 8ul. 831. 1959. Butter, D.R. 1954 — A System for the Classification of Corn Inbred Lines - PhD. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = (HI + LO)/2-50, but not less than 5.	· ·		2 = STRONG		3 1 = WHITE	·		
2 STALK ROT (Diplodie) 2 NORTHERN LEAF BLIGHT 1 SOUTHERN LEAF BLIGHT 2 SMUT (Head) 3 SOUTHERN RUST 2 CORN SMUT (COMMON) 2 BACTERIAL WILT (Stews 3 STUNT OTHER (Specify) 11. INSECT RESISTANCT (O = Not Tested, 1 = Susceptible, 2 = Resistant): Tolerant 1 CORNBORER (Surropean) 3 ROOTWORM (Northern) 4 ROOTWORM (Northern) 5 ROOTWORM (Southern) 6 ROOTWORM (Southern) 7 OTHER (Specify) 12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN: CHARACTER 4 VARIETY 5 Maturity 5 May 1 Character 6 Maturity 7 May 1 Character 7 Maturity 7 May 1 Character 8 Maturity 8 May 1 Character 9 May	10. DISEAS	SE RESISTANCE (C	= Not Tested, 1 =		· · · · · · · · · · · · · · · · · · ·	•••		
D SOUTHERN RUST 2 CORN SMUT: (COMMON) 2 BACTERIAL WILT (Stews of Marce Development Agriculture. Yearbook 1937. Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors) Emerson, R.A., G.W. Beacle, and A.C. Fraser. A Summary of Linkage Studies in Malza, Ornell A.E.S., Mem. 180. 1935 Butler, D.R. 1954 – A System for the Classification of Corn Indred Lines – Pho. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: Hi = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not greater than 86. Lo = Minimum air temperature in Fahrenheit, but not greater than 86. Lo = Minimum air temperature in Fahrenheit, but not greater than 86. Lo = Minimum air temperature in Fahrenheit, but not greater than 86. Lo = Minimum air temperature in Fahrenheit, but not greater than 86. Lo = Minimum air temperature in Fahrenheit, but not greater than 86. Lo = Minimum air temperature in Fahrenheit, but not less than 50.	2	STALK ROT (Di	plodia)	101	•	2 s	TALK ROT (Gibberel	la)
O BACTERIAL LEAF BLIGHT OTHER (Specify) 11. INSECT RESISTANCT (O = Not Tested, 1 = Susceptible, 2 = Revistant): Tolerant 1	2.	NORTHERN LE	AF BLIGHT	1 SOUTHER	N LEAF BLIGHT	2 s	мит (Head)	
O BACTERIAL LEAF BLIGHT OTHER (Specify) 11. INSECT RESISTANCT (O = Not Tested, 1 = Susceptible, 2 = Provisionnt): Tolerant 1		SOUTHERN RUS	ST .	2 CORN SM	υτ (Common)	2 8	ACTERIAL WILT (S	tewa
11. INSECT RESISTANCT (O = Not Tested, 1 = Susceptible, 2 = Resistant): Tolerant 1		BACTERIAL LE	AF BLIGHT	1 MAIZE DV	VARF MOSAIC	0 s	TUNT	
1 COBNBORER (European) 0 EARWORM 0 SAPBEETLE 0 APHID 0 ROOTWORM (Northern) 1 ROOTWORM (Western) 0 ROOTWORM (Southern) OTHER (Specify) 12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN: CHARACTER VARIETY CHARACTER VARIETY Maturity A632 Kernel Type B37 Plant Type B37 Quality (Edible) Ear Type B37 Usage A632 & B47 REFERENCES: U.S. Department Agriculture. Yearbook 1937. Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors) Emerson, R.A., G.W. Beadle, and A.C. Freser. A Summary of Linkage Studies in Melze.Cornell A.E.S., Mem. 180. 1935 The Mutants of Maize. 1968. Crop Science Society of America. Medison, Wisconsin. Stringfield, G.H. Maize Inbred Lines of Ohlo, Ohio A.E.S. Bul. 831. 1959. Butler, D.R. 1954 – A System for the Classification of Corn Inbred Lines – PhD. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = (HI + LO)/2-50, but not less than 0.	11. INSECT			usceptible, 2 = Presiste	wre):	•		
(European) ROOTWORM (Northern) OTHER (Specify) 12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN: CHARACTER VARIETY Maturity A632 Kernel Type B37 Plant Type B37 Quality (Edible) Ear Type B37 Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors) Emerson, R.A., G.W. Beadle, and A.C. Freser. A Summary of Linkage Studies in Maize. Cornell A.E.S., Mem. 180. 1935 The Mutants of Maize. 1968. Crop Science Society of America. Medison, Wisconsin. Stringfield, G.H. Maize Inbred Lines of Ohlo, Ohio A.E.S. Bul. 831. 1959. Butler, D.R. 1954 – A System for the Classification of Corn Inbred Lines – Pho. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = (HI + LO)/2-50, but not less than 0.	· 		-	Tolera	int			
12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN: CHARACTER VARIETY CHARACTER VARIETY Maturity A632 Kernel Type B37 Plant Type B37 Quality (Edible) Ear Type B37 Usage A632 & B47 REFERENCES: U.S. Department Agriculture. Yearbook 1937. Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors) Emerson, R.A., G.W. Beadle, and A.C. Fraser. A Summary of Linkage Studies in Melze.Cornell A.E.S., Mem. 180. 1935 The Mutants of Maize. 1968. Crop Science Society of America. Medison, Wisconsin. Stringfield, G.H. Maize Inbred Lines of Ohlo, Ohio A.E.S. Bul. 831. 1959. Butler, D.R. 1954 – A System for the Classification of Corn Inbred Lines – PhD. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = (HI + LO)/2-50, but not less than 0.		conneonen (Europear		EARWORM	0 sa	PBEETLE	O APHII)
12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN: CHARACTER VARIETY CHARACTER VARIETY Maturity A632 Kernel Type B37 Plant Type B37 Quality (Edible) Ear Type B37 Usage A632 & B47 REFERENCES: U.S. Department Agriculture. Yearbook 1937. Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors) Emerson, R.A., G.W. Beadle, and A.C. Freser. A Summary of Linkage Studies in Melze.Cornell A.E.S., Mem. 180. 1935 The Mutants of Maize. 1968. Crop Science Society of America. Medison, Wisconsin. Stringfield, G.H. Maize Inbred Lines of Ohlo, Ohio A.E.S. Bul. 831. 1959. Butler, D.R. 1954 – A System for the Classification of Corn Inbred Lines – Pho. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. L0 = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = (HI + LO)/2-50, but not less than 0.		ROOTWORM (No	orthern)	ROOTWORM (Weste	rn)			-
12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN: CHARACTER VARIETY CHARACTER VARIETY Maturity A632 Kernel Type B37 Plant Type B37 Quelity (Edible) Ear Type B37 Usage A632 & B47 REFERENCES: U.S. Department Agriculture. Yearbook 1937. Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors) Emerson, R.A., G.W. Beadle, and A.C. Freser. A Summary of Linkage Studies in Melze.Cornell A.E.S., Mem. 180. 1935 The Mutants of Maize, 1968. Crop Science Society of America. Medison, Wisconsin. Stringfield, G.H. Maize Inbred Lines of Ohio, Ohio A.E.S. Bul. 831. 1959. Butler, D.R. 1954 – A System for the Classification of Corn Inbred Lines – PhO. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = (HI + LO)/2-50, but not less than 0.	0	ROOTWORM (So	uthern)	OTHER (Specify)	· · · · · · · · · · · · · · · · · · ·		·	
CHARACTER VARIETY A632 Kernel Type B37 Plant Type B37 Quality (Edible) Ear Type B37 REFERENCES: U.S. Department Agriculture. Yearbook 1937. Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors) Emerson, R.A., G.W. Beadle, and A.C. Fraser. A Summary of Linkage Studies in Melze.Cornell A.E.S., Mem. 180. 1935 The Mutants of Maize. 1968. Crop Science Society of America. Medison, Wisconsin. Stringfield, G.H. Maize Inbred Lines of Ohlo, Ohio A.E.S. Bul. 831. 1959. Butler, D.R. 1954 – A System for the Classification of Corn Inbred Lines – PhD. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = (HI + LO)/2-50, but not less than 0.		FIEC MOST OF OSE	L V DESEMBLING	TUAT CUIDMITTED	OR THE CHARACTERS	DIVEN.		
Maturity A632 Plant Type B37 Quality (Edible) Ear Type B37 Usage A632 & B47 REFERENCES: U.S. Department Agriculture. Yearbook 1937. Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors) Emerson, R.A., G.W. Beadle, and A.C. Fraser. A Summary of Linkage Studies in Malze.Cornell A.E.S., Mem. 180. 1935 The Mutants of Maize. 1968. Crop Science Society of America. Madison, Wisconsin. Stringfield, G.H. Maize Inbred Lines of Ohlo. Ohio A.E.S. Bul. 831. 1959. Butler, D.R. 1954 - A System for the Classification of Corn Inbred Lines - PhO. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = (HI + LO)/2-50, but not less than 0.			LY RESEMBLING	-:		<u> </u>	VARIETY	
Plant Type B37 Quality (Edible) B37 Usage A632 & B47 REFERENCES: U.S. Department Agriculture. Yearbook 1937. Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors) Emerson, R.A., G.W. Beadle, and A.C. Freser. A Summary of Linkage Studies in Malze.Cornell A.E.S., Mem. 180. 1935 The Mutants of Maize. 1968. Crop Science Society of America. Medison, Wisconsin. Stringfield, G.H. Meize Inbred Lines of Ohlo. Ohio A.E.S. Bul. 831. 1959. Butler, D.R. 1954 — A System for the Classification of Corn Inbred Lines — Pho. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = (HI + LO)/2-50, but not less than 0.								•
REFERENCES: U.S. Department Agriculture. Yearbook 1937. Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors) Emerson, R.A., G.W. Beadle, and A.C. Fraser. A Summary of Linkage Studies in Melze, Cornell A.E.S., Mem. 180. 1935 The Mutants of Maize. 1968. Crop Science Society of America. Medison, Wisconsin. Stringfield, G.H. Meize Inbred Lines of Ohlo, Ohio A.E.S. Bul. 831. 1959. Butler, D.R. 1954 — A System for the Classification of Corn Inbred Lines — Pho. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = (HI + LO)/2-50, but not less than 0.) (a)	י עם	
REFERENCES: U.S. Department Agriculture. Yearbook 1937. Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors) Emerson, R.A., G.W. Beadle, and A.C. Fraser. A Summary of Linkage Studies in Malze.Cornell A.E.S., Mem. 180. 1935 The Mutants of Maize. 1968. Crop Science Society of America. Madison, Wisconsin. Stringfield, G.H. Maize Inbred Lines of Ohlo. Ohio A.E.S. Bul. 831. 1959. Butler, D.R. 1954 — A System for the Classification of Corn Inbred Lines — PhO. Thesis, Ohio State University. COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = (HI + LO)/2-50, but not less than 0.					<u> </u>	5167	A632 & B4	7
COMMENTS: Heat units are accumulated from daily temperatures as follows: HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = $(HI + LO)/2-50$, but not less than 0.		ENCES: U.S. Department, Corn: Culture, Pr Emerson, R.A., G. The Mutants of M Stringfield, G.H. M	ocessing, Products. W. Beadle, and A.C aize. 1968. Crop S Azize Inbred Lines (ook 1937. 1970 Avi Publishing (; Fraser: A Summery (cicence Society of Amo of Ohlo, Ohio A.E.S.	Company, Westport, Conne of Linkage Studies in Malze erica. Madison, Wisconsin. Bul. 831. 1959.	.Cornell A.E.S., M	s (Authors) em. 180. 1935	
HI = Maximum air temperature in Fahrenheit, but not greater than 86. LO = Minimum air temperature in Fahrenheit, but not less than 50. Heat units = (HI + LO)/2-50, but not less than 0.								
	HI : LO :	= Maximum ai = Minimum ai	r temperatu r temperatu	re in Fahrenh re in Fahrenh	eit, but not gre eit, but not les	ater than		.——
			<u> </u>	o, but not re	29 CHGH O.		16	Page

14D. Exhibit D. Additional Description of 'B09'

'B09' is a yellow dent inbred line of corn, Zea mays L.

As an inbred per se, 'B09' is similar to the public inbred B37 in a number of plant and seed characteristics. There are distinguishable differences, however, between the two inbreds as already stated in Exhibit B. The main differences between them is maturity as lines per se and in hybrid combinations. 'B09' is an early version of B37 and is about the same maturity as public inbred line A632. For use in hybrids, 'B09' is most similar to A632 and to Pioneer inbred line B47. For comparitive purposes, data are attached for 'B09' and B47 where both lines were crossed to the same inbred tester lines and the hybrids evaluated in the same locations.

'B09'has average or above average tolerance to Northern leaf blight (Helminthosporium turcicum), eye spot (Kabatiella zeae), common rust (Puccinia sorghi), Stewart's bacterial wilt (Erwinia stewartii), and head smut (Sphacelotheca reiliana). It is below average for tolerance to Southern leaf blight (Helminthosporium maydis), Helminthosporium leaf spot (Helminthosporium carbonum), gray leaf spot (Cercospora zeae), anthracnose (Colletotrichum graminicola), Goss's bacterial wilt (Corynebacterium nebraskense), downy mildew (Peronosclerospora sorghi), and virus diseases.

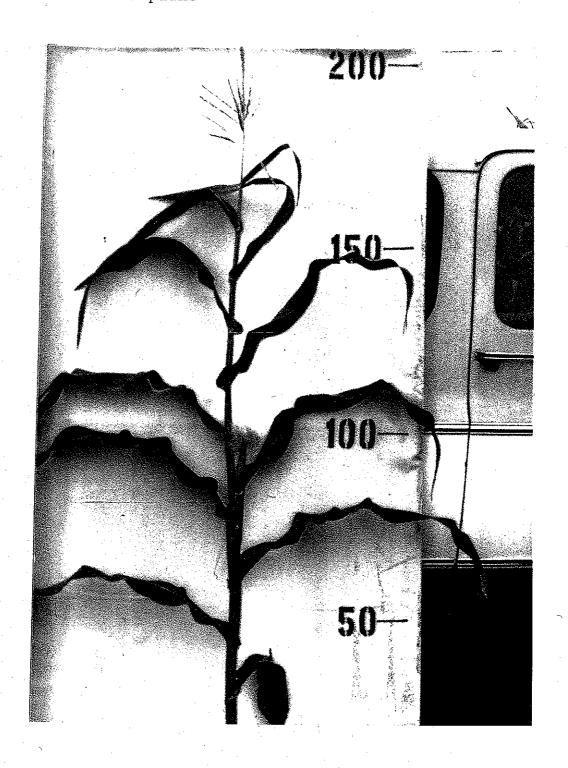
Inbred ears of 'B09' can sometimes be severely scatter grained when stress conditions are experienced. 'B09' is also susceptible to the first brood of European corn borer. In hybrids, 'B09' produces well filled F1 ears. Its hybrids are high yielding for their maturity but slightly below average for grain dry-down after physiological maturity. Its stalk quality is average to above average while root quality is below average. Grain quality and test weight of its hybrids are average; combine harvestability is above average. Late-season plant health of 'B09' hybrids is average to below average. Plant height of these hybrids is average while ear height is slightly above average.

Comparison of 'B09' and B47 crossed to same tester lines and the hybrids evaluated at the same locations. All values are expressed as percent of the test mean except yield, which is expressed as bushels/acre adjusted to 15.5% grain moisture (1981 Data). Exhibit D.

-						
-						
	Ear Height	43	103	97	9	
•	Plant Height	43	86	66	-	
	Seedling Vigor	50	97	111	14	
	Cob Scores	41	109	108	-1	
	ViileuO nisio	45	96	97	H	
-	Test Weight	63	100	100	0	
•	Stay Green	38	103	104	1	
•	Ears/Plot	26	100	100	0	-
•	Root Lodging	25	96	105	6	
	Stalk Lodging	99	100	101	-	
	CDN ≳y€q	19	101	100	-	
	Moisture	99	101	98.	3	
	Percent Yield	99	66	66	0	
	Yield	99	141	142		
	Inbred		'B09'	B47		
		No. of Reps.			Diff.	

14D. Exhibit D. Additional Description of B09 (continued)

A. Whole plant



14D. Exhibit D. Additional Description of B09 (continued)

B. Tassel



14D. Exhibit D. Additional Description of B09 (continued)

C. Ear

